Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts
D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-1 Supply any recent estimates Verizon has of industry level and/or firm level own-price elasticities of demand, split by business and residential and for business and residential aggregated, for any of: access lines, local calls, local call minutes, the bundle of access lines and local calls, intra-LATA calls, intra-LATA call minutes, inter-LATA calls, inter- LATA call minutes, international calls and international call minutes.

REPLY: Verizon MA informs me that it does not have any industry-level, own-price elasticity coefficient estimates. Industry level own-price elasticity coefficient estimates have been summarized by Lester D. Taylor in "Telecommunications Demand in Theory and Practice" (Kluwer Academic Publishers 1994) as follows:

	Residence	Business	Total
Access lines	-0.17[3], -0.11[3], -0.08[3], -0.12[3]	-0.09[3]	-0.06[3]
Local calls	N/A	N/A	N/A
Local call minutes	N/A	N/A	N/A
Access lines & local calls	-0.02[1,2]	-0.03[1,2]	-0.21[1,2], -0.20[1,2], -0.03[1,2], -0.27[1,2]
Intra-LATA calls	N/A	N/A	N/A
Intra-LATA call minutes	N/A	N/A	-0.75[4]
Inter-LATA calls	N/A	N/A	N/A
Inter-LATA call minutes	N/A	N/A	N/A
International calls	N/A	N/A	N/A
International minutes	N/A	N/A	N/A

[1] Actual service studied was "Basic Service."
[2] Taylor, p. 294.
[3] Taylor, p. 280.
[4] Taylor, p. 137.

VZ #222

REPLY: AG-VZ 1-1 CON'T

Verizon MA also does not have selected firm-level own price elasticity coefficient estimates, but such estimates were recently developed using data and service characteristics of business and toll services provided by Verizon MD. Specifically, the estimated own-price elasticity for regulated business services (i.e., access, usage and features) purchased by customers who use ordinary business lines, Centrex access lines and PBX trunks is –2.5. The estimated own-price elasticity coefficients for residence, business and total (residence plus business) intraLATA toll service are –2.1, -1.3 and –1.9, respectively. Because these estimates were developed using data and service characteristics of business and toll services provided by Verizon MD, they may, or may not, be applicable to services provided by Verizon MA.

VZ # 222

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-2 Does Verizon consider it likely that industry level own-price elasticities of demand, split by business and residential and for business and residential segments aggregated, for any of intra-LATA calls, intra-LATA call minutes, inter-LATA calls, inter-LATA call minutes, international calls, and international call minutes, anywhere within a plus or minus 30% range of current prices and allowing for a 12 month or greater of adjustment, are likely to exceed 50 in absolute value? If so please indicate which services and the circumstances as to when it is likely in your view that their elasticities are or would exceed 50.

REPLY: Verizon MA has performed no studies. However, based on the range of industry-level own-price elasticities for telecommunications services in the economics literature (*e.g.*, the Taylor survey cited in the answer to Question 1) and the recent study in Maryland, it would be highly unlikely for the industry-level own-price elasticity of demand for the services cited above to exceed 50 in absolute value.

VZ # 223

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-3 Does Verizon consider it likely that industry level own-price demand elasticities, split by business and residential and for business and residential aggregated, for access lines, local calls, local call minutes and access lines bundled with local calls, anywhere within a plus or minus 30% range of current prices and allowing for a 12 month or greater period of adjustment, are likely to be less than 0.001 in absolute value? If so please indicate which services and the circumstances as to when you view any of these elasticities are or would be less than 0.001.

REPLY: Verizon MA has performed no studies. However, based on the range of industry-level own price elasticities for telecommunications services in the economics literature (*e.g.*, the Taylor survey cited in the answer to Question 1) and the recent study in Maryland, it would be unlikely for the industry-level own-price elasticity of demand for services cited above to be less than 0.001 in absolute value.

VZ # 224

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: Paula L. Brown
Title: Vice President-Regulatory

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-4 What percent of customers who will face a $1.90/month increase in access fees customers does Verizon estimate will drop service due to the prices' rise? Is it correct that 2 million customers will face a $1.90/month increase in access fees under the tentative ruling?

REPLY: Verizon MA revised the offset associated with Department ordered rate reductions from $1.90 to $1.97 and from $2.37 to $2.44. Please see Attachment A "Tab B revised "Attachment I, Workpaper 1, Line 19 and Line 25 of Verizon MA's August 28, 2002 pre-filed testimony of Paula Brown.

Verizon MA has not conducted a study to determine the number of customers that may drop service as a result of the $1.97/month or the $2.44/month increase. However, as noted in Ms. Brown's testimony, the monthly Residence Dial Tone Line rate was increased by $8.72 from 1990 to 1994. This increase had little effect on the residential subscriber penetration rates in Massachusetts as reported by the FCC which remained at about the same level (96.6 percent in 1990 and 96.5 percent in 1994) over the period. Those increases moved the Residence Dial tone Line rate to a more economically efficient level without materially affecting residential subscriber penetration and created an environment to encourage competitive entry.

All of the 2,745,851 residence access lines, with the exception of 163,605 Lifeline customer lines, will incur the Dial Tone Line offset of $1.97/month.

REPLY: AG-VZ 1-4 CON'T

Of the 2,745,851 total residence access lines, only non-TouchTone customers will incur an additional increase of $0.47 per month associated with the elimination of the separate TouchTone charge. There are 238,879 non-TouchTone customers. Of these non-TouchTone customers, 14,233 Lifeline customers who will not incur the additional $0.47/month increase.

Therefore, the proposed changes are as follows:

Lines increased by only $1.97 *	2,357,600
Lines increased by $2.44* ($1.97+$0.47)	224,646
Life Line customers w/o increase	163,605
Total Residence Access Lines	2,745,851

* Note: As shown on Attachment A "Tab B revised", Attachment I, Workpaper 1, Line 1, 24,648 of Verizon MA's lines are subject to resale. The total price increase on those lines is reduced by the prevailing discounts.

VZ # 225

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts
D.T.E. 01-31 Phase II

Respondent: Paula L. Brown
Title: Vice President-Regulatory

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-5 What percent of customers who will face a $2.37/month increase in access fees does Verizon estimate will drop service due to the price rise? Is it correct that 750,000 customers will face a $2.37/month increase in access fees under the tentative ruling?

REPLY: See the Company's response to Information Request AG-VZ 1-4.

VZ # 226

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-6 In Verizon's view, is it likely to be economically efficient, when pricing multiple outputs which incur a set of shared costs, such as access, local and long distance call service, to set the price of all outputs, except for one, equal to the marginal cost of those outputs, and price the remaining output so as to recover all the shared costs? If prices in practice were set this way for Verizon's own services in Massachusetts, is it possible that such prices could be economically efficient and if so what conditions would need to hold for this to be true? Is it likely any conditions sufficient to make such prices economically efficient presently hold in Massachusetts (or are likely to hold in Massachusetts in the foreseeable future)?

REPLY: The most efficient way to price services when fixed costs are present is to apply Ramsey pricing rules, which (essentially) mark up service prices above incremental cost in inverse proportion to the own price elasticity of demand. Under this definition of efficient prices, the answers to the three questions posed are straightforward.

(i) It would be possible to observe efficient service prices in which one service price was marked up significantly above incremental cost while all other service prices were set close to incremental cost. Such prices would not be unlikely in telecommunications markets where the own-price elasticity of demand for network access may be an order of magnitude smaller in absolute value than the own-price elasticities of other services.

REPLY: AG-VZ 1-6 CON'T

(ii) Such prices would be efficient in Massachusetts if the own-price elasticity of demand for one service were extremely small relative to the own-price elasticities of demand of all other services.

(iii) Verizon MA has performed no studies of Massachusetts own-price elasticities, but industry-level own-price elasticities of demand for telecommunications services reported in the economics literature suggest differences of at least an order of magnitude in the price elasticities for access and long distance services.

VZ # 227

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-7

In Verizon's view, is it likely to be economically efficient, when pricing multiple outputs which incur a set of shared costs, for the price of a subset of outputs to exceed total shared costs plus their own marginal costs? In Verizon's view, under what circumstances would it be economically efficient to price in this way? For example, assume in Massachusetts that the sum of prices for Verizon's access and local calls (or the price for the bundle, access and local calls) exceeds total costs common to access and local calls and other telephony services plus the marginal cost of access and local calls. Under what circumstances would this be economically efficient? Is it likely any circumstances sufficient to make such prices economically efficient presently hold in Massachusetts (or are likely to hold in Massachusetts in the foreseeable future)?

REPLY:

Efficient prices recover all incremental and fixed costs of operations. Fixed costs can be direct to a service, shared across a subset of services or common across all services. Given that framework, the answers to the three questions posed above are straightforward.

(i) It is certainly possible for efficient prices for a subset of services to exceed the incremental costs of the services plus the fixed costs shared among the services. It is not possible for efficient prices for a subset of services to exceed the sum of the incremental costs of the services, the fixed costs shared among the services and the fixed costs common to all services.

REPLY: AG-VZ 1-7 CON'T

(ii) When there are substantial common costs and the own-price elasticity of the subset of services is relatively small, Ramsey prices would recover the sum of incremental cost, fixed costs of shared services and a relatively large fraction of common costs from the subset of services in question.

(iii) Pricing access and local usage in Massachusetts above the sum of the incremental costs, the fixed costs shared between the services and costs common to all other services cannot be efficient or even sustained given the presence of competitive options for all services. Pricing access and local usage above the sum of incremental costs and the fixed costs shared between the services can be efficient when common costs are substantial and the own-price elasticity of access and local usage is relatively small in absolute value.

VZ # 228

Verizon New England Inc.
d/b/a Verizon Massachusetts

Commonwealth of Massachusetts

D.T.E. 01-31 Phase II

Respondent: William E. Taylor
Title: Senior Vice President

REQUEST: Attorney General Set #1

DATED: August 26, 2002

ITEM: AG-VZ 1-8

In Verizon's opinion, can economically efficient prices for a subset of services that share costs with a wider range of services, be simply gauged by asking whether the prices of the subset of services lie between the incremental and stand alone costs of the subset of service? For example, can it be efficient, where there are shared costs:

1. If all services are priced at incremental costs, so full cost recovery is not achieved (since no service makes any contribution to shared costs)?

2. for total revenues earned to exceed total costs even though all individual prices lie above incremental cost and below stand alone cost? If so, is it likely any circumstances sufficient to make such prices economically efficient presently hold in Massachusetts (or are likely to hold in Massachusetts in the foreseeable future)?

REPLY:

No. Prices for a set of services that exceed the stand-alone cost of the services or that are below the incremental cost of the services cannot be efficient. However, not all prices that lie between incremental and stand-alone cost are efficient.

1. No.
2. No. Ramsey-efficient prices have the characteristic that total revenue equals total cost, so that no set of prices that violates this constraint can be efficient.